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Transforming Ayurveda Studies with Online Quizzes: A Game-Based Approach to Learning

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Abstract: ***In the digital era, traditional approaches to teaching and assessment are increasingly complemented by interactive and engaging learning tools. Among these, Kahoot has emerged as a widely used game-based platform that promotes active learning and enhances student participation. For Ayurveda education, which demands both conceptual understanding and practical application, Kahoot offers an innovative approach to bridging theory with practice. By integrating quizzes aligned with the BAMS curriculum, the platform allows students to assess their knowledge, clarify concepts, and apply them in clinical contexts in a dynamic and enjoyable way. Furthermore, its progress-tracking feature provides instructors with valuable insights into student performance, enabling targeted feedback and remediation. This article explores the potential of Kahoot as a supplementary tool in Ayurveda education, highlighting its role in making learning more engaging, effective, and application-oriented, while encouraging active student involvement in the classroom.***

Keywords: Ayurveda, Kahoot, online quiz, gamification, education

1. Introduction

1) Interactive Learning for Complex Ayurvedic Concepts

Ayurveda is an ancient science based on the mind–body connection and is founded on principles such as *Vata, Pitta,* and *Kapha Doshas, Sapt Dhatus, Agni,* and various *Samprapti* (pathogenesis) models. Mastery of these concepts requires conceptual clarity and the ability to apply Ayurvedic principles in clinical contexts. However, BAMS students often find it challenging to assimilate the vast amount of information in Ayurvedic texts—ranging from descriptions of herbs and formulations to dietary guidelines and treatment protocols—because these concepts often appear abstract or highly theoretical (1, 2). This challenge underscores the need for innovative pedagogical strategies that make complex material more engaging.

Game-based learning (GBL) has been recognized as a powerful educational strategy to enhance student motivation, retention, and participation (3, 4). Kahoot offers an interactive platform where students engage actively with content and receive immediate feedback, an essential feature of e-learning (5). By integrating multiple-choice questions, true/false statements, and image-based puzzles, Kahoot encourages students to recall principles, think critically, and apply knowledge.

For example, a Kahoot quiz may ask:

- "How many *Sharir Gunas* are described in Ayurveda?"
- "Which of the following *Dravyas* is an ingredient of *Laghu Panchamoola*?"
- "Which of the following is the *Pratinidhi Dravya* for *Pushkarmoola*?"

Such questions not only test knowledge but also make learning enjoyable and memorable, strengthening conceptual foundations and application skills (6).

2) Instant Feedback and Reinforcement

Kahoot quizzes provide instant feedback after each question. Students are immediately informed whether their response is correct or incorrect, and instructors can include explanations or additional resources to reinforce correct answers. This feature is particularly valuable in Ayurveda, as it allows students to quickly recognize mistakes and fosters a deeper understanding of concepts (7).

For instance, if a student answers incorrectly on *Ritu Haritaki,* Kahoot can provide a short explanation clarifying that it refers to consuming *Haritaki* powder with different adjuvants according to the season. This immediate corrective feedback strengthens retention. By helping students identify errors and refine understanding in real-time, Kahoot accelerates the learning process and promotes long-term retention (5, 6).

3) Flexibility in Learning: Anytime, Anywhere

One of Kahoot's major strengths is flexibility. Ayurveda students can participate in quizzes from home, clinics, or while traveling, which is particularly useful for those balancing coursework with practical training, fieldwork, and internships. Kahoot is compatible with smartphones, tablets, and laptops, making it easy to engage during short breaks.

Furthermore, quizzes can be scheduled anytime, giving students control over their learning and enabling self-paced revision. This flexibility accommodates diverse learning styles and fosters continuous, self-directed learning (8, 9).

4) Promoting Healthy Competition and Motivation

Kahoot's real-time competitive format adds excitement to Ayurveda studies, motivating students to perform better. Scoreboards and rankings provide an incentive to engage actively and improve performance (10).

In Ayurveda, where mastery of topics such as *Rasa, Guna, Veerya, Vipaka, Prabhava,* and botanical classifications of *Dravyas* is essential, competition encourages students to revisit key topics and reinforce memory. The combination of

competition and revision makes Kahoot a valuable tool for boosting both motivation and performance (6, 7).

5) Fostering Collaborative Learning

Kahoot also supports collaborative learning through group quizzes, where teams work together to solve questions. This format reinforces Ayurvedic concepts while promoting teamwork and peer learning.

For example, if students are uncertain about the properties of *Ashwagandha,* they can collaborate with teammates to review its *Rasa, Veerya,* and effects on stress and vitality. Such group interactions enhance collective understanding and create opportunities for peer-to-peer learning (5, 9).

6) Tracking Progress and Identifying Areas for Improvement

Kahoot enables instructors to track student and class performance on individual questions. Analytics highlight areas of difficulty—such as *Pachana Dravyas* and their *Gunas*—and provide opportunities for targeted discussion (8).

For example, if students struggle with the clinical applications of *Shadrasa,* instructors can revisit the topic in detail. Students also benefit from tracking their scores over time, which helps them reflect on progress and identify areas for improvement. This feedback loop promotes self-regulated learning and mastery of foundational Ayurvedic concepts (7,5).

7) Engaging Visuals and Gamification

Kahoot's use of colorful visuals, images, and videos makes complex Ayurvedic topics more accessible. Diagrams of the *Pancha Mahabhutas* or images of herbs, for instance, create strong visual associations, improving retention (9).

Gamification features such as leaderboards, rewards, and badges add fun and motivation, encouraging sustained engagement (11, 7).

8) Cost-Effective and Time-Efficient

Kahoot is cost-effective, requiring no additional expense for printing or exam administration. Quizzes can be easily created and shared, making it ideal for institutions with limited resources (10).

Its automatic grading also saves instructors significant time by instantly generating reports, allowing educators to focus on personalized feedback and discussion rather than manual correction (8).

2. Conclusion

Organizing online quizzes through Kahoot for Ayurveda education is a powerful way to enhance student engagement, retention, and conceptual clarity. With features such as instant feedback, flexibility, collaborative formats, visual elements, and gamification, Kahoot transforms Ayurveda learning into an interactive and enjoyable experience.

By leveraging these advantages, instructors can foster active learning environments where students assess knowledge, collaborate with peers, and track their progress. Whether used as a revision tool, a classroom activity, or a formative assessment, Kahoot has the potential to bridge ancient Ayurvedic wisdom with modern pedagogical innovation, making learning both effective and engaging (6, 5, 7).

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